

Name : Shawon Barman

Reg. No : 18201043

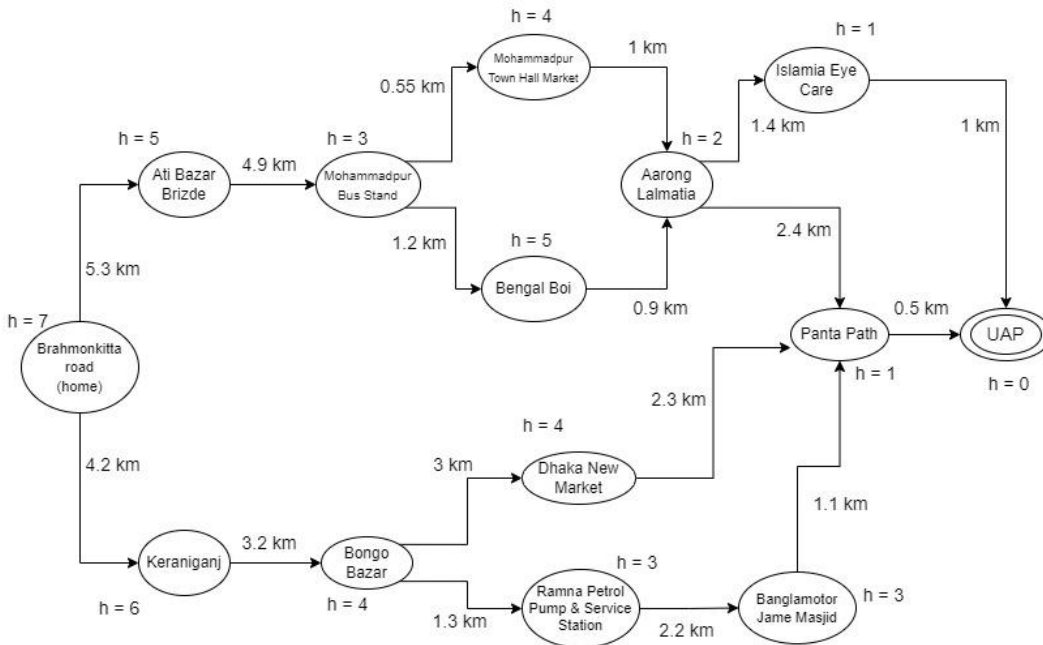
Here,

Start Node : Shawon's house

Goal Node : UAP

Cost in Distance : kilometer (km)

### State space:



### Heuristic Values:

$$h(\text{Brahmonkitta road}) = (43 \% 4) + 4 = 3 + 4 = 7$$

$$h(\text{Ati Bazar Brizde}) = (43 \% 5) + 3 = 3 + 3 = 6$$

$$h(\text{Mohammadpur Bus Stand}) = (43 \% 5) = 3$$

$$h(\text{Mohammadpur Town Hall Market}) = (43 \% 5) + 1 = 3 + 1 = 4$$

$$h(\text{Bengal Boi}) = (43 \% 5) + 2 = 3 + 2 = 5$$

$$h(\text{Aarong Lalmatia}) = (43 \% 2) + 1 = 1 + 1 = 2$$

$$h(\text{Islamia Eye Care}) = 43 \% 2 = 1$$

$$h(\text{Panta Path}) = 43 \% 3 = 1$$

$$h(\text{Keraniganj}) = (43 \% 4) + 3 = 3 + 3 = 6$$

$$h(\text{Bongo Bazar}) = (43 \% 4) + 1 = 3 + 1 = 4$$

$$h(\text{Dhaka New Market}) = (43 \% 4) + 1 = 3 + 1 = 4$$

$$h(\text{Ramna Petrol Pump \& Service Station}) = (43 \% 4) = 3$$

$$h(\text{Banglamotor Jame Masjid}) = (43 \% 2) + 2 = 1 + 2 = 3$$

$$h(\text{UAP}) = 0$$

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**Path cost :**  $4.2 + 3.2 + 1.3 + 2.2 + 1.1 + 0.5 = 12.5$  km

**Shortest path:**

Brahmonkitta road (home) -> Keraniganj -> Bongo Bazar -> Ramna Petrol Pump & Service Station -> Banglamotor Jame Masjid -> Panta Path -> UAP